AD-A255 309

ION PAGE

Form Approved
OMB No 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE FORCIBLE ENTRY IN A MAJOR REGIONAL CONTINGENCY: THE OPERATIONAL PLANNER'S WORST NIGHTMARE?	5. FUNDING NUMBERS
6. AUTHOR(S) MAJOR MICHAEL P. MARLETTO, USMC	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) SCHOOL FOR ADVANCED MILITARY STUDIES ATTN: ATZL-SMV FORT LEAVENWORTH, KS 66027-6900 COM (913) 684-3437 AV 552-3437	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED	12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

SEE ATTACHED

14. SUBJECT TERMS FORCE ENTRY, FORCIBLE ENTRY, OPERATIONS, CAMPAIGN PLANNING, CRETE, INCHON, JOINT OPERATIONS	15. NUMBER OF PAGES 62
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED

Forcible Entry In a Major Regional Contingency The Operational Planner's Worst Nightmare?

A Monograph
by

Major Michael P. Marletto
USMC

School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

Second Term AY 91–92

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

Major Michael P. Marletto

Title of Monograph: Forcible Entry in a Major Regional Contingency: The Operational Planner's Worst Nightmare?

Approved by:

Patrick Donahue
LtCol. Patrick E. Donahue, BS — Monograph Director

James R McDonough
COL James R. McDonough, MS — Director, School of Advanced Military Studies

Philip J. Brookes
Philip J. Brookes, Ph.D. — Director, Graduate Degree Program

Accession For	
NTIS GRA&I	☑
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

Accepted this 3rd day of June 1992

ABSTRACT

FORCIBLE ENTRY IN A MAJOR REGIONAL CONTINGENCY: THE OPERATIONAL PLANNER'S WORST NIGHTMARE? by Major Michael P. Marletto, USMC, 62 pages.

This monograph examines the capability of contemporary operational planners to successfully plan and execute a large scale forcible entry operation in response to a major regional contingency. The relationship of a forcible entry in achieving a campaign's or major operation's objectives is examined in light of the finite forcible entry capability found in current force structures and transportation assets.

The monograph uses the Operational Operating Systems outlined in TRADOC Pam 11-9, Blueprint of the Battlefield, to examine the historical forcible entry operations conducted at Crete and Inchon. From this analysis a theoretical framework for forcible entry operations is developed and compared to current U.S. forcible entry capabilities.

The monograph concludes that a successful large scale forcible entry will be a function of an operational planner's ability to capitalize on the complementary capabilities of all available forces and operating systems. Combat power in a contingency region is found to be a function of the successful orchestration of all of the Operational Operating Systems. Shortages in one system may offset by increasing the strength of another system.

TABLE OF CONTENTS

I. Introduction 1

II. Historical Perspective: Inchon 1950 6

III. Historical Perspective: Crete 1941 16

IV. Contemporary Capabilities 26

V. Conclusions 40

Appendix A 42

Appendix B 46

Appendix C 47

Appendix D 50

Endnotes 52

Bibliography 58

INTRODUCTION

For almost fifty years following World War II the U.S. National Security Strategy emphasized the containment of the Soviet Union and its communist ideology. With the end of the Cold War and the collapse of the Soviet Union, President Bush outlined a new National Security Strategy focused on regional challenges, instead of a global war against the Soviet Union. (1) This strategy is built upon the four foundations of strategic deterrence and defense, forward presence, crisis response, and reconstitution. (2)

The changing world scene has caused the National Military Strategy to shift focus from its long standing emphasis on detering a conventional conflict by forward defending U.S. forces. The new National Military Strategy, which has been developed from the new National Security Strategy, has shifted the focus of the U.S. military to a diverse, flexible strategy which is oriented on responding decisively to potential regional crises. (3)

For over forty years, the day-to-day forward presence of U.S. forces in regions vital to national interests provided the key to averting crisis and preventing war. (4) As budgetary constraints reduce the size of the military and the number of forces maintaining a forward presence, the capability to respond to a regional crisis will now depend on the ability to rapidly project CONUS based forces to the crisis area. These forces must be prepared to deter and, if necessary, fight with decisive military force against regional adversaries. (5) While the National Military

Strategy envisions that these future military operations may take place in multinational operations under the guidance of international bodies such as the United Nations, it also states that the United States must possess the capability to act unilaterally. (6)

In any projection of CONUS based military forces to meet a future regional crisis, the operational planner must consider three questions. First, do the forces have access to their destination or will they have to forcibly gain access? Second, can the forces get to the theater from their CONUS bases in enough strength to apply decisive force? Third, once the forces arrive in theater can they be sustained? (7)

In answering these questions, the operational planner must consider that in any future <u>major</u> regional contingency (i.e. requiring more than a division response) the U.S. will be required to deploy CONUS based forces to the contingency region to mount an effective military response. The <u>initial</u> force mix and flow into the crisis area should be a function of the type of access to the region that U.S. forces will encounter.

To gain access to <u>any</u> crisis area, the U.S. will have to conduct <u>force entry operations</u>. Force entry operations are defined by the JCS as "The introduction of an aggregation of military personnel, weapon systems, vehicles, and necessary support, or combination thereof, embarked for the purpose of gaining access through land, air, or amphibious operations into an objective area." A <u>force entry</u>

operation is classified as either an administrative deployment or a forcible entry. (8)

An administrative deployment is conducted when the introduction of U.S. forces is unopposed. The ability to conduct an administrative deployment rests on the availability of access to forward bases in the crisis area. The projection of U.S. military power overseas has historically required a network of secure refueling, resupply, and maintenance facilities in or on the fringes of the disputed region. (9) For example, access to the developed infrastructure of Saudi Arabia was essential to the successful prosecution of the Gulf War.

In contrast to the benign environment of an administrative deployment, a forcible entry is "the military lodgement by air, land, and/or maritime forces in the face of armed opposition." (10) Forcible entry operations may be conducted as the precursor (e.g. Normandy) or adjunct (e.g. Inchon) to a land campaign. Forcible entry operations can range from relatively small scale operations such as the invasions of Grenada and the Falklands to the immense undertakings of World War II such as Sicily, Normandy, and Okinawa.

Since World War II the United States has responded with military force to a variety of regional contingencies. These contingencies have ranged from small battalion sized operations such as the 1975 rescue of the SS Mayaguez to the multi-corps deployment of Operation Desert Shield/Storm. In each of these contingencies, force entry operations were

successfully executed. These operations have demonstrated a proven capability for conducting large scale administrative deployments and small scale (i.e. less than division sized) forcible entry operations. However, not since 1950 has a large scale (i.e. division or larger) forcible entry operation been conducted (or required). While recent history points toward administrative deployments as the norm, the operational planner cannot dismiss the alternative of a forcible entry. The contemporary military analyst Jeffrey Record sums up this possibility by stating, "An intervention force known to be dependant on a friendly reception is likely not to get one." (11)

The lack of a requirement over the past forty years for a large scale forcible entry operation has led to a comparative inattention in maintaining the United States's traditional and once formidable forcible entry capability. (12) The focus of all strategic mobility iniatives over the past forty years has primarily been on aircraft and sealift enhancements suited for a benign landing environment. (13) The reduction of forward deployed forces and the benign entry environment they offer will place a premium on the ability to conduct force entry operations. While any force can conduct an administrative deployment, only forces possessing specialized transport, equipment, and training are capable of successful forcible entry operations.

The United States's current ability to conduct a forcible entry is limited to the simultaneous employment of one Marine Expeditionary Force (MEF) and an Army airborne

brigade. (14) In the amphibious arena, this capability falls short of the JCS goal under the old National Military Strategy of the ability to simultaneously lift one and one-third MEFs. (15) Surprisingly, this capability will shrink even further under the new National Military Strategy, though emphasis is placed on power projection. (16) This limited forcible entry capability will be a vulnerability in the U.S.'s power projection ability and may serve to encourage potential regional adversaries to conduct the preemptive conquest or destruction of the ports and airfields necessary for an administrative deployment. (17) As a result, the ability to deter a foe by a rapid administrative deployment of forces may be denied.

The operational planner may be faced with only one force entry option: a forcible entry. In executing this option, he will have to rely on the existing force structure with its associated capabilities and limitations. If the crisis is small (e.g. Grenada), the planner will undoubtedly conclude that a decisive force can be introduced to the region. However, in a major regional contingency (e.g. a combined Iraq/Iran invasion of Saudi Arabia) that requires a larger than division response, the planners conclusions concerning the U.S.'s ability to introduce decisive force may not be as clear.

This paper will examine the operational planner's problem by answering the question, "Can current deficiencies in the United States's capability to conduct forcible entry operations in support of a major regional contingency be

overcome by operational planners?" To answer this question, two historical forcible entry operations (Inchon 1950 and Crete 1941) will be analyzed by examining them in the context of the six Operational Operating Systems (OOS) outlined in TRADOC Pam 11-9, Blueprint of the Battlefield (Appendix A). From this historical analysis, a theoretical operational concept for forcible entry operations will be developed. Contemporary United States capabilities to fulfill the conceptual framework will then be examined. Finally, recommendations will be made to future operational planners on how to overcome any identified deficiencies in current capabilities.

HISTORICAL PERSPECTIVE: INCHON 1950 (OPERATION CHROMITE)

On June 25, 1950 the North Korean People's Army (NKPA) crossed the 38th Parallel in a quest to unify the Korean peninsula under the control of North Korea's communist regime. Within seventy-two hours NKPA soldiers had reached Seoul and the remnants of the Republic of Korea (ROK) Army were in full retreat southward. (18) Even as these events were unfolding, the Commander in Chief, Far East (CinCFE), General of the Army Douglas MacArthur was laying the groundwork for an operational counterstroke.

On June 29th, MacArthur flew to Korea to gain a personal view of the frontline situation. After landing at Suwon, MacArthur drove to south bank of the Han River, just southwest of Seoul. Here he stood for an hour observing the burning buildings across the river in Seoul and the lines of ROK troops and refugees moving southward. This scene was

enough to convince MacArthur that the defensive potential of the ROK was exhausted. He recognized that U.S. troops would have to be committed to Korea to stabilize the situation and an amphibious envelopment would be required to offset the NKPA's manpower superiority. (19) On September 15, 1950, MacArthur's vision of an operational turning movement would become a reality when the assault elements of X Corps stormed the seawall of Inchon.

The realization of MacArthur's vision to land behind the NKPA was no small feat of arms. From the date of MacArthur's reconnaissance on June 29th to D-Day at Inchon (Operation Chromite) on September 15th, a complex plan had to be developed and a nonexistent corps had to be established, manned, equipped, and transported to the objective area. This feat is even more remarkable when the then dismal condition of America's armed forces are considered.

In 1950, the United States had continued a conventional force build-down that had commenced with demobilization at the end of World War II. Eager to take advantage of its nuclear monopoly, the United States sought to shape its forces in economic vice strategic terms. This emphasis on budgetary frugality saw the Army shrink from ninety divisions in 1945 to ten understrength and undertrained divisions by 1950. The Marine Corps was reduced from six active divisions and air wings to two. The Navy was reduced to eight operating aircraft carriers. More significantly for the Operation Chromite planners, the once mighty

amphibious fleet had been reduced from a wartime high of six-hundred-ten to ninety-one. (20) With all these limitations, MacArthur did have one factor working in his favor: a body of experienced amphibious planners who had been schooled in the art of amphibious forcible entry during the campaigns of World War II. This staff expertise would allow the assault force to overcome the many challenges it was to face during the planning and execution of Operation Chromite.

What is the significance of this forty year old operation to today's operational planner? The answer to this question is two-fold. First, the landings at Inchon represent the last large scale (i.e. division or larger) forcible entry operation that the United States has conducted. Second, the forces utilized for Operation Chromite, two Marine regimental combat teams (RCTs) in the assault echelon and a follow-on Army division, roughly equate to contemporary amphibious forcible entry capabilities. An examination of Inchon will thus provide valuable insights for today's operational planner by identifying the capabilities that must be present for a successful large scale forcible entry operation.

OPERATIONAL MOVEMENT AND MANEUVER AT INCHON

Operation Chromite was clearly designed with the goal of achieving a position of operational advantage which would lead to strategic results. MacArthur sought to gain this positional advantage by taking advantage of his superior seaborne mobility by landing at Inchon behind the mass of

NKPA focused on the Pusan Perimeter, and following the landing by a drive to Seoul. He would exploit the tactical success of a forcible entry at Inchon by advancing to Seoul to cut the lines of communications of the NKPA forces encircling the 8th Army in the Pusan perimeter. By combining the effects of his operational envelopment at Inchon with an 8th Army breakout from the Pusan perimeter, MacArthur sought to inflict a decisive defeat on the NKPA. (21)

To posture the forces for the operational maneuver envisioned, an operational movement of forces within the theater was necessary. For Operation Chromite the X U.S. Corps, consisting of the 1st Marine Division, the Army's 7th Infantry Division, and supporting troops, would have to move by sea from staging areas in Japan and Korea to Inchon. A lack of available amphibious shipping forced the planners to requisition former U.S. landing ships which had been transferred to Japan for use as coastal transport and fishing boats. Thirty of the forty-seven Landing Ship Tanks (LSTs) required for the operation were obtained in this manner. (22) In Japan, Kobe and Yokohama were used as the ports of embarkation for the 7th Infantry Division, the bulk of the 1st Marine Division, and X Corps troops. These elements departed for Inchon between 5 and 13 September. (23)

The difficulty of this movement was magnified by an unexpected typhoon and the fact that the 1st Marine Division had just arrived in Japan after a trans-Pacific movement

from its home base in California. The last of the Division's combat battalions joined the assault force off the coast of Inchon after a month long transit from the Mediterranean via the Suez Canal. (24)

The 1st Marine Division's 5th Marine Regiment presented a different problem. It had been committed in August to combat in the Pusan Perimeter and would have to be withdrawn for Operation Chromite. On September 5th and 6th, the 5th Marines were detached from the 8th Army and began preparations for their participation in Chromite. (25) This force repositioning provides an example of operational movement being used to shift forces within a theater to a more decisive position.

OPERATIONAL FIRES AT INCHON

Air support was utilized operationally to attack critical facilities, isolate the battlefield, and maintain air supremacy. From D-10 to D-5, carrierborne aircraft struck roads, railroads, supply points, and the electrical power system between Kunsan and the 38th Parallel. (26) An additional five days of interdiction support in the Inchon-Soeul area was allocated to the landing force for post D-Day operations. (27) The task of gaining and maintaining air supremacy was assigned to the fast carrier task force (TF-77). (28) Air supremacy was facilitated by attacking every known enemy airfield northward up the coast from Inchon. (29)

OPERATIONAL PROTECTION AT INCHON

The very nature of Operation Chromite served to protect

the force from NKPA operational level actions. By utilizing his superior seaborne mobility and naval supremacy, MacArthur was able to conduct his operational movement and maneuver out of the reach of the NKPA's capabilities. MacArthur enjoyed complete freedom of action and protection until the time and place of his choosing. Thus operational protection was enhanced by pitting his superiority at sea and in the air against the enemy's weakness.

A significant deception effort was mounted to conceal the actual location of the Chromite landings. Working heavily in MacArthur's favor was the fact that Inchon represents one of the most improbable places in the world to conduct an amphibious assault. Amphibious doctrine sets out seven criteria for a landing area. (30) Inchon met none of them. Thus, while The New York Times carried an article which stated that: "An amphibious landing on the Korean coast well behind the enemy's frontlines is an obvious and possible strategy," the very improbability of a landing at Inchon provided a high degree of protection. (31) This fact was enhanced by a comphrehensive deception effort which was designed to lead the enemy to believe that a landing would occur at Kunsan.

Airstrikes and naval bombardment were conducted against railroads, highways, road junctions, and bridges within a thirty mile radius of Kunsan. On D-4 a major aerial bombardment was aimed at military installations in Kunsan. To further enhance the deception effort, the 5th Marines, who were embarking for the operation in Pusan, were given an

open air lecture over public address systems (for the benefit of Korean onlookers) on the beaches, terrain, and defenses of Kunsan. (32)

OPERATIONAL COMMAND AND CONTROL AT INCHON

The initial planning for Chromite was completed by Far East Command's Joint Strategic Plans and Operations Group (JSPOG). Formed in 1949, this planning cell operated under the direction of the Far East Command's G-3, Brigadier General Edwin K. Wright, USA. By July 23rd, the JSPOG had taken MacArthur's original guidance for an amphibious thrust which would cut the NKPA's lines of communications and produced three draft plans. These plans outlined landings at Inchon, Kunsan, and Chumunjin. Following MacArthur's decision to land at Inchon, Far East Command Operation Plan 100-B (code name Chromite) was issued on August 12, 1950. (33)

To direct the landing at Inchon, MacArthur established a joint task force (JTF) on August 20th. This task force was centered around the U.S. 7th Fleet and was designated JTF-7 (Appendix B, Table 1). The commander of the 7th Fleet, Vice Admiral Arthur D. Struble, was designated the JTF commander. JTF-7 would control all operations until the conclusion of the amphibious phase of the operation. (34)

To control operations of a two division corps ashore, the JSPOG realized that an operational land component headquarters would be required. Unfortunately, no standing headquarters capable of performing this function existed in 1950. Two possible solutions to this problem were explored.

First, augment an existing component headquarters (Fleet Marine Force, Pacific (FMFPAC)). Second, form a provisional corps headquarters from the Far East Command staff. (35)

The first option offered the advantage of capitalizing on the amphibious expertise of the FMFPAC staff. The Far East Command Chief of Staff, Major General Edward M. Almond supported the second option. He argued that once the landing at Inchon was completed Chromite became essentially a land operation and Army officers were better suited than Marines for that type of operation. MacArthur agreed with Almond, and on August 26th the X Corps was activated. General Almond was named commander, while simultaneously retaining his post as Far East Command, Chief of Staff. (36) On D+6, X Corps was established ashore and assumed command and control of operations from JTF-7. (37)

OPERATIONAL INTELLIGENCE AT INCHON

The Chromite planners found themselves in an unenviable position as they tried to get "into the mind" of the enemy. Although not stated in theoretical terms, it is clear that the NKPA was identified as the enemy operational center of gravity. (38) Unfortunately, the continual offensive actions of the NKPA had not given the intelligence community a chance to observe how the NKPA would conduct defensive operations. (39) The NKPA's operational response to Chromite could only be deduced from his force dispositions. The focus of NKPA operations continued to be on the destruction of the 8th Army in the Pusan Perimeter. Intelligence analysts estimated that the forces capable of

reinforcing the Inchon-Soeul area consisted of three uncommitted reserve divisions in the rear of the line of forces in contact with the 8th Army. (40)

Information on enemy formations was sadly lacking. Much of the operational intelligence estimates gathered for Operation Chromite were often based on negative enemy activity in the objective area. Intelligence estimates were often based on deductions drawn from what the enemy was not doing. For example, while aerial reconnaissance of the Inchon area revealed extensive fortifications, it also showed that these positions were mostly unoccupied. From this information, analysts estimated that enemy resistance to the initial landings would be light to moderate. (41)

The NKPA's force dispositions allowed the Far East Command's intelligence section to see the campaign through the enemy commander's eyes. The lack of forces that were responsive to the Inchon area and the delay in manning the defenses of Inchon indicated that the enemy, while not dismissing the probability, considered the likelihood of a landing at Inchon as low. The decision to land at Inchon exploited the NKPA's own estimate of the situation and capitalized on its decision to concentrate its efforts on the Pusan Perimeter.

OPERATIONAL SUPPORT AT INCHON

The amphibious nature of Operation Chromite demanded that special care be taken toward sustaining the force. The attack force would be dependant on the supplies that it carried with it until lines of communications could be

established between the theater support base in Japan and Inchon. To ensure that the assault force would be able to maintain the momentum of the initial attack, the following levels of supply stockage were carried with the force: Classes I, II, and III - 30 days and Class V - 15 days. (42) Recognizing that the high tidal fluctuations in Inchon would make initial sustainment difficult, eight landing ship tank (LST) were loaded with two hundred tons of supplies and beached. (43)

In addition to ensuring that adequate stocks were carried with the assault force, considerable attention was given toward establishing port and airfield capabilities as early as possible. Air and naval gunfire were controlled to limit damage to key port facilities in Inchon and Kimpo airfield outside Seoul. As a result of these efforts the port of Inchon was partially operational by D+2 and Kimpo airfield was operational by D+3. (44) The success in these efforts is evidenced by the fact that by D+6: 25,512 tons of supply (twice the amount projected in the X Corps logistic plan), 53,882 troops, and 6,629 vehicles had been introduced into the theater. (45)

SUMMERY

Inchon provides an example of how an imaginative and well designed plan can be used to overcome significant operational obstacles. By capitalizing on their superiority in the air and on the sea, the Chromite planners were able to chose a location for their forcible entry which avoided the enemy's strength, allowed for the rapid introduction of

reinforcements, and quickly achieved the intended operational objective.

HISTORICAL PERSPECTIVE: CRETE 1941 (OPERATION MERCURY)

During the spring of 1941 the German Army had dealt the British and their allies an overwhelming defeat in the Balkans. The German Army had rolled through Greece and Yugoslavia. German planners saw the Eastern Mediterranean as a potential avenue to Britain's Middle East oilfields and the Suez Canal. In addition to threatening British interests, operations in the Eastern Mediterranean would serve to secure the southern flank of the German Army's upcoming offensive into the Soviet Union. (46)

For all its speed and success, the Balkan campaign was seen as incomplete by German planners as long as the island of Crete remained in British hands. (47) From Crete, British airpower could threaten the Ploesti oilfields in Rumania and thus deny the German Army its critical oil reserves. (48) If taken, Crete would provide the Germans a base for air operations that would allow them to dominate the Eastern Mediterranean and serve as a springboard for future operations into the Middle East. (49)

While the value of Crete could not be denied, the Germans were faced with the stark reality of British naval superiority. The British Navy would prevent any attempt to conduct an amphibious operation. An innovative solution was required if Crete was to be taken. The German planners proposed to answer this dilemma by capitalizing on their superiority in the air. German air power would allow them

to bypass the British strength at sea and utilize airborne forces to forcibly enter the area of operations. The resulting plan, Operation Mercury, would combine an initial airborne assault with air and sea landed reinforcements to decisively defeat British forces on Crete.

The British Navy's success at preventing the German introduction of the planned sea landed reinforcements forced this operation to become completely dependent on air. This fact makes Operation Mercury the only large scale forcible entry in history conducted entirely by air.

Contemporary operational planners contemplating an airborne forcible entry can draw valuable lessons from the German experience. If a crises arises away from the world's littorals or requires a more rapid response than amphibious forces can provide, airborne or air assaulted forces will provide the sole forcible entry option for the planner.

OPERATIONAL MOVEMENT AND MANEUVER ON CRETE

Operation Mercury was conceived as a major operation designed to provide a base for air operations against the British in the Eastern Mediterranean (50) and secure the southern flank of Germany's strategic position. To achieve this operational objective, joint forces would exploit the tactical success of an airborne assault. The airfields of Crete were decisive points which had to be taken to allow the introduction of airlanded reinforcements. To accomplish this, Lieutenant General Kurt Student, the commander of the Luftwaffe's XI Air Corps, developed a plan which called for a two phased airborne and glider assault to capture Crete's

airfields. Reinforcements would then be introduced by follow-on air and amphibious landings. (51)

The first phase called for morning airborne and glider attacks by elements of the Luftwaffe's 7th Air Division on objectives on the western part of the island. These attacks would seize the Maleme airfield, the key terrain surrounding the airfield, and the capital city of Khania. The second phase would be conducted in the afternoon by the remainder of the 7th Air Division and would consist of airborne and glider attacks to seize the cities of Iraklion and Rethimon and their respective airfields. Both phases were to be completed by nightfall to allow the rapid introduction of reinforcements. The Army's 5th Mountain Division constituted the reinforcing element which would be landed by both aerial transport and a convoy of steamers at Maleme and Iraklion. (52) Once the reinforcing element had landed, the British defending forces (the center of gravity) would be rolled up along the single one-hundred-seventy mile long road which ran the length of the island.

The operational movement for Operation Mercury consisted of shifting forces within the Mediterranean theater of operations from bases in Greece to more decisive positions of Crete. The modes anticipated for this movement were air and sea using joint, combined, and locally commandeered assets.

The airborne and airlanded portions of the movement were carried out by a fleet of six-hundred Junkers 52 aircraft. These aircraft would carry the 7th Division's

paratroopers and also tow a fleet of eighty gliders. (53) While the number of transport aircraft sounds impressive, it must be remembered that the Junkers 52 only had a capacity of thirteen paratroopers. (54) This fact had forced the German planners to arrange for two separate lifts to move the assault elements of the 7th Division. (55) Following the assault drops and the capture of an airfield, the same aircraft would airland the first five-thousand men of the 5th Mountain Division to reinforce the paratroopers. (56)

The sealifted portion of the invasion was planned to lift the heavy equipment (e.g. tanks and heavy artillery) and personnel that could not be airlifted. Using a collection of locally procured steamers and the Italian Navy as escort, the flotilla would carry two battalions of the 5th Mountain Division and the remaining two-thousand paratroopers of the 7th Division. (57) The results of this movement plan will be discussed under the Protection OOS.

OPERATIONAL FIRES ON CRETE

The German plan called for operational fires to isolate the battlefield and destroy the enemy's capability to resist in the air. The Germans sought to exploit their superior capabilities in the air to achieve these tasks. A total of about six-hundred-fifty bombers, fighters, dive bombers, and reconnaissance aircraft of the Luftwaffe's VIII Air Corps would support the invasion. (58)

On May 13th the Germans began their strikes against Crete's airfields. The British defenders were taken by surprise since they lacked radar and an effective air

command and control system. (59) The handful of British aircraft on Crete were quickly overwhelmed. Realizing the futility of resisting the German air attacks, the British conceded air supremacy to the Germans on May 17th when they evacuated their remaining aircraft to Egypt. The British forces would face the battle with no protection from the German's unremitting air attacks. (60)

German air power was also counted on to neutralize the British advantage at sea by isolating the island and protecting the seaborne elements. Despite an overwhelming superiority and the fact that it was able to inflict the most costly losses on the British Navy of any battle in World War II, the Luftwaffe was only partially successful in achieving this objective. Despite its heavy losses, the British Navy was able to prevent the German's seaborne reinforcement, and evacuate approximately eighteen-thousand of the original thirty-thousand man British force. (61)

OPERATIONAL PROTECTION ON CRETE

The failure of the German's to completely accomplish the function of Operation Protection almost spelled disaster for the attacking force. Failures in operational security and force protection gave the British several advantages. Fortunately for the Germans, the British were unable to completely exploit these advantages.

The German plan counted heavily on the protection that the force would receive by the operational surprise and speed of an airborne assault. German operational security was compromised and operational surprise was lost when

British cryptanalysts broke the Luftwaffe's ciphers. (62)

The British ability to successfully break the German codes was based on their ability to exploit mistakes made by German Enigma machine operators. The relative inexperience of the Luftwaffe Enigma operators made the Luftwaffe's signals the most vulnerable of all the services. From the Luftwaffe's encrypted signals the British were able to learn the objectives and date of the German attack. The British defenders were unable to fully exploit this intelligence success because their lack of mobility prevented them from rapidly shifting reinforcing forces to Operation Mercury's identified objectives. (63)

In addition to problems in operational security, the Germans failed to adequately protect the seaborne portion of the operation. The German failure to effectively neutralize the British Navy with airpower prevented the planned seaborne reinforcement of Crete. As a result, the attackers were denied critical heavy equipment such as tanks and artillery. More importantly, the two-thousand paratroopers embarked aboard ship represented the Germans' only remaining forcible entry capable troops. With the sea lines of communications denied them, the Germans had to rely completely on airlanding supplies and reinforcements. Without any available paratroopers, they had to resort to the expedient of crash landing aircraft onto unsecured airfields to introduce initial reinforcements. (64)

OPERATIONAL COMMAND AND CONTROL ON CRETE

The operational command and control of Operation

Mercury was entrusted to Luftwaffe General Alexander Lohr's Air Fleet IV comprised of the VIII and XI Air Corps. Detailed operationally planning was assigned to Lieutenant General Student's XI Air Corps. In addition to its assigned 7th Air Division and air transport, the XI Air Corps was augmented by the attachment of the Army's 5th Mountain Division, and elements of the 6th Mountain and 5th Armored Divisions (Appendix B, Table 1). (65)

The seeds of failure for the seaborne portion of Operation Mercury can be traced to the XI Air Corps lack of joint planning experience. With the XI Air Corps serving as the planning headquarters, Operation Mercury took on a decidedly airborne flavor. None of the meticulous care that went into planning the airborne phases of the operation was evident in the planning for the seaborne phases. The commander of the 5th Mountain Division commented that the only equipment available for the seaborne forces were a "1/500,000 map and a pocket compass." (66)

OPERATIONAL INTELLIGENCE ON CRETE

Of all the German problems encountered during Operation Mercury, none were as glaring as their failures in operational intelligence. The lack of intelligence provided to the XI Air Corps planners caused an operational plan to be adopted which quickly disintegrated under the test of combat.

German intelligence for Operation Mercury was gathered primarily by aerial reconnaissance. To the pilots carrying out the reconnaissance, the island appeared lifeless. The

olive groves of Crete provided excellent concealment for the British defenders. In addition to an apparent lack of activity on the island, the Germans also found little shipping activity around the island. From this information the Germans concluded that Commonwealth troops from Greece had been evacuated at night to destinations other than Crete and that the strength of the island garrison remained at one division comprised of two infantry brigades and one artillery regiment. (67) Instead of the 10,000 troops the Germans expected, the actual garrison strength was approximately 40,000. (68) Thus, German planning began with a completely erroneous estimate of British strength. The enemy center of gravity was thus perceived to be much weaker than it actually was and the corresponding amount of force that would be needed to attack it was also underestimated.

This erroneous intelligence led to Student's decision to attempt to seize all three of Crete's airfields simultaneously, rather than concentrating his forces on a single airfield. This decision almost spelled disaster for the Germans. When the Germans encountered stronger resistance than anticipated, they found that because of their dispersion of forces over three landing zones, insufficient forces were available to seize the airfields. The Germans managed to capture the Maleme airstrip only after the British mistakenly pulled back to regroup for a counterattack. (69)

The Germans compounded their errors on British force strength with poor terrain analysis. German intelligence

concentrated on locating the decisive points of the airfields at Maleme, Retimo, and Iraklion. In doing this, they failed to pay adequate attention to the terrain around the airfields. For example, the landing zone chosen for the first phase landings at Maleme was described as a high plateau. In fact, it was a wide shallow valley. (70) Upon landing at Maleme, the Germans found their landing zone swept by fire from the key terrain overlooking their postions.

OPERATIONAL SUPPORT ON CRETE

Operational support for Operation Mercury was planned to be conducted upon both sea and air lines of communication from theater support bases in Greece. The relatively undeveloped nature of the theater support bases were the first problem that had to be overcome. The Balkan transportation system was limited and in many cases had been damaged by fighting. Heavy supplies had to transported by coastal steamer. Of critical importance was the necessity to build up a sufficient stockage of fuel for the immense air armada. This had to be accomplished by using fuel barrels. In addition to problems of transportation, the Germans found the available airfields wanting for the number of aircraft that would operate out of them. Most of the airfields were found to be small, dusty, and lacking the installations for large aircraft formations. The local population was pressed into service to improve the available airfields. (71)

The German planners anticipated that the air and sea

lines of communication would be opened by the evening of D-Day. As already discussed under the Protection OOS, the sea lines of communication were interdicted by the British Navy. As a result, the heavy equipment and supplies that could only be carried by ships never reached the island during the combat operations. The sea lines were only established on May 28th following the British surrender and evacuation.

The lack of a sea line of communication placed total reliance for support on the air lines. Fortunately for the Germans, the Luftwaffe's complete mastery of the air allowed this to take place. The lightly armed German paratroopers and the replacements that were introduced by air transport were successful because the British defenders were also lightly armed and lacked the armor necessary to defeat the assault forces. Because the Germans relied on light forces and the fighting lasted only eight days, the large support requirements that a heavy force would have required to sustain operations were avoided. Aerial transport could provide the necessary manning and arming of the force.

SUMMERY

Operation Mercury provides a sharp contrast to the previous examination of Operation Chromite. The German plan suffered from failures in intelligence, force protection, concentration, and an over-reliance on airpower. The German conquest of Crete can be attributed as much to British failures as German successes.

The Germans suffered more than four-thousand killed and two-thousand wounded on Crete. (72) The heavy losses

suffered on Crete made it the "graveyard of the German paratrooper," (73) never again would the Germans attempt a large scale airborne operation.

The British and Americans drew different lessons from Mercury. They recognized that the Germans had too closely linked the airborne forces with its objectives. Airborne forces could be successful if they were dropped close instead of on their objectives. This would allow the airborne forces to concentrate decisive force prior to taking their objectives. (74)

CONTEMPORARY OPERATIONAL MANEUVER & MOVEMENT CAPABILITY

Operations Chromite and Mercury demonstrate the importance of a well planned and executed forcible entry to create the conditions for attaining a campaign's or major operation's objectives. From these operations, lessons can be drawn within the Maneuver and Movement OOS on operational mobility, forcible entry site selection, concentration of force, and the relationship of the forcible entry to a campaign or major operation.

Both Chromite and Mercury show how the inherent operational movement prior to a forcible entry offers the invading force an operational mobility advantage over the defender. A force embarked on ships or aircraft can move over operational distances much faster than a land based force. Despite technological innovations in land force mobility (e.g. helicopters), today's amphibious shipping and transport aircraft maintain this mobility advantage. This operational mobility advantage will be maintained until the

force lands. At that point, the relative low ground operational mobility of amphibious or airborne forces will probably pass this advantage to the enemy.

The judicious selection of the forcible entry site can turn the operational mobility advantage into a positional advantage. At Inchon, MacArthur used his operational mobility advantage to move deep to the rear of the NKPA. By landing at Inchon, he transferred this mobility advantage into a positional advantage by chosing a site which placed his forces within close striking distance to the NKPA lines of communications. In contrast, Student sacrificed his mobility advantage by choosing landing zones which offered him no positional advantage over the British. Fortunately for Student, the British voluntarily conceded their position.

Ideally today's planner can follow MacArthur's lead and chose a point of entry which will yield a positional advantage. The introduction of helicopters and hovercraft (e.g. the Navy's LCAC) has dramatically increased the possible landing sites for an amphibious operation. With these enhanced capabilities, the amount of the world's coastlines suitable for an amphibious landing has been increased from twenty to seventy percent. (75)

In spite of these enhancements, geography and political boundaries still play a part in amphibious planning. During the Gulf War, the limited coastline of Kuwait meant that any point could be defended by Iraqi forces. In similar instances, the operational planner must concentrate all of

the forces available to him. Airborne and air assaulted forces can be used in conjunction with amphibious forces to converge on a single decisive point from multiple axes. This type of operation would avoid Student's failure to concentrate his forces on a single decisive point.

Student's decision to land his forcible entry forces on multiple decisive points (the airfields) almost spelled disaster for the Germans. When the Germans found these points more heavily defended than anticipated, they were unable to generate the necessary force strength with the initial assault wave. Since their reinforcements lacked a forcible entry capability, the expedient of crash landing the reinforcements transport aircraft had to be adopted. Both of these decisions led to extremely high casualties. Student would have been better served to concentrate his combat power on a single decisive point, land his initial assault forces away from its objective, and then move on the objective.

Today's U.S. planner faces the same dilemma as MacArthur and Student - a finite forcible entry capability and the necessity to build decisive force in a theater. Solving this dilemma will be the planner's greatest challenge. This problem is primarily a function of a fixed amount of amphibious shipping and transport aircraft.

The current strength of the Navy's amphibious fleet is 65 ships. (76) This provides the capability to simultaneously lift one Marine Expeditionary Force (MEF). Unless amphibious shipping enhancement programs are adopted,

the pending block obsolescence of twenty-five percent of the amphibious fleet between 1996 and 2010 will decrease this lift capability to two-thirds of a MEF. (77) This problem is further compounded by the fact that the amphibious fleet is split between the Atlantic and Pacific Fleets and at any given time some of these ships will be undergoing maintenance.

The 1950 Operation Chromite expedient of turning to an allied country (see page 9) for amphibious shipping will provide little help to today's planner. The shrinking U.S. amphibious fleet still dwarfs those of other nations. For example, the French and British assault amphibious capability consists of four and two ships respectively. (78)

Similar transport problems exist for airborne forces. The current requirement for the Military Airlift Command (MAC) is to be able to drop one airborne brigade in a single lift. To drop a medium brigade with an attached tank company, air defense battery, and cavalry, engineer, and signal augmentation would require the commitment of forty percent of the entire U.S. C-141B transport fleet. A heavy brigade, with a tank battalion, would require twice the number of aircraft. (79)

The scarcity of amphibious shipping and transport aircraft necessary for the simultaneous lift of large forces will require the conduct of joint amphibious and airborne operations to achieve a sufficient force concentration to overcome all but lightly defended positions. Airborne forces can be used to complement amphibious forces in three

ways.

First, they can be assigned the seizure of key terrain or man-made features needed to protect the beachhead from counterattack, facilitate a breakout or both. For example, during the invasion of Sicily in 1943, British and American paratroopers were used to seize bridges and roads leading out of the beachhead and to disrupt German armored reserves attempting to counterattack the beachhead. (80)

Second, airborne forces can be used as a rapid reinforcement to an amphibious assault. After the seizure of a beachhead, the airborne forces can be dropped into secure landing zones. This option also provides for the introduction of combat strength without taxing already scarce amphibious shipping. (81) Expanding this concept to allow air dropped forces to link-up with heavy equipment positioned on Maritime Prepositioned Shipping (MPS) would greatly enhance the capability to reinforce a forcible entry by eliminating the requirement for a secure airfield to land MPS personnel.

The third employment option for airborne forces is to employ them simultaneously with the amphibious assault by landing them among or directly behind the enemy defenses. At Normandy, a British airborne battalion was used in this manner when it was dropped directly on a coastal defense battery overlooking the invasion beaches. The U.S. conducted a similar operation during its coordinated airborne/amphibious assault on Corregidor. (82)

While the complementary capabilities of amphibious and

airborne forces can spell success for a forcible entry, they will rarely provide the decisive force necessary to achieve all of a campaign's objectives. The operational planner must understand the relationship of the forcible entry to the campaign. The forcible entry serves as an "enabler" for the introduction of the rapid and deliberate reinforcements which will provide the necessary decisive ground forces. This concept is embodied in the Joint Force Sequencing model (Appendix C). This model promotes the use of complementary force capabilities and recognizes the fact that forcible entry forces are a subset of the entire power projection.

This concept was demonstrated at Inchon when the 1st Marine Division's successful forcible entry enabled X Corps forces to achieve the campaign objective of cutting the NKPA lines of communication. Conversely, Student's attempt to achieve his campaign objective relied too heavily on his forcible entry forces and narrowly avoided disaster. The U.S. does not possess the transportation to introduce decisive force in a major regional contingency by forcible entry alone. The forcible entry only serves as the first portion of the entire Joint Force Sequencing system. The rapid and deliberate force sets of the model will provide the decisive ground force required in a major regional contingency. By understanding the complementary capabilities and relationships of forces and lift that the Joint Force Sequencing model represents, an operational planner can ensure the successful build-up of decisive force in a contingency region.

CONTEMPORARY OPERATIONAL FIRES CAPABILITY

The ability of today's operational planner to conduct operational fires has benefitted greatly from evolving and emerging technology. The variety and number of systems available, coupled with their increased accuracy, make operational fires one of the strong suits of contemporary power projection forces.

Operations Chromite and Mercury demonstrated the necessity for a forcible entry force to successfully isolate the battlefield and destroy critical enemy functions. In both cases, offensive airpower was used to attack targets which would prevent the reinforcement of the defending forces and assist in gaining the critical function of air superiority by attacking enemy air bases. In Chromite, these fires were focused on land targets since the primary means of an NKPA operational response would come overland and from land based aircraft. In Mercury, they were directed at the British fleet and Crete's airfields. This ensured that the seaborne reinforcement of Crete's defenders could not take place and the land based aviation would be neutralized.

Today's planner will also have to ensure that the forcible entry site is isolated from an enemy operational response and air superiority is gained. Depending on the geographical location of the crisis area, the planner will have available to him a variety of air and surface launched systems which will allow him to accomplish these functions. Aircraft will deliver laser and optically guided weapons

capable of hitting point targets. The high cost of these weapons means that a large number of "dumb" munitions will still be required. The improvements in modern aircraft bombing systems has also improved their accuracy. This was demonstrated during the Gulf War when targets in major urban areas such as Baghdad were destroyed with minimal collateral damage to surrounding structures. (83)

In a crisis response, air support will come from both land and sea bases. Land based support will be dependant on political agreements which secure basing rights in or near the crisis area. Even in those instances where basing rights cannot be obtained, land based air support will still be possible through aerial refueling. The inflight refueling capability of today's aircraft has increased their range to the point where range is now a function of pilot endurance. This point was demonstrated by the seventeen hour long B-52 missions flown from Diego Garcia during the Gulf War. (84) Sea based carrier aircraft will avoid these basing agreement considerations by operating in international waters. For example, during the Gulf War six aircraft carriers provided support from the Red Sea and Persian Gulf. (85)

In addition to air power, the operational planner now has surface launched systems capable of providing operational fires. These systems currently include cruise missiles and the Army Tactical Missile System (ATACMS). The high cost of these weapons is offset by the fact that they give the planner the capability to hit stationary targets

without risking aircraft or their pilots. Future improvements to these weapons will allow them to achieve automatic target identification and discrimination. (86)

The capabilities of today's operational fire systems will provide the operational planner the preponderance of his combat power in the early stages of a campaign. The proper utilization of operational fires will ensure that the conditions necessary for the introduction of decisive ground forces are met.

CONTEMPORARY OPERATION PROTECTION CAPABILITY

Protection will remain a continual challenge to the operational planner. Operational protection must take on a multi-dimensional approach to be effective. The historical examples of Inchon and Crete clearly demonstrate this.

On Crete, the Germans relied heavily on surprise to provide protection to their operation. When surprise was compromised by poor operational security and British intelligence efforts, the success of the entire operation was placed in jeopardy. In contrast, the Inchon planners were able to regain the operational surprise they lost to reports in the press by the selection of an improbable landing site and a comprehensive deception effort.

In addition to highlighting the importance of operational security, both Crete and Inchon demonstrate the importance of establishing both sea and air superiority. Air superiority allows freedom of operations free from the effects of enemy air attacks and the establishment of air lines of communication (suitable only for light

sustainment). Sea superiority allows the introduction of amphibious forces, heavy reinforcements, and long term sustainment.

In both historic cases, air superiority was gained. This allowed overwhelming air power to be used against operational targets and for providing tactical support. In both cases, an attempt was made to gain sea superiority. However, the Germans were unsuccessful during Operation Mercury. As a result they were denied the sea lines of communication necessary for the introduction of heavy reinforcements.

Contemporary operational planners will face the same protection challenges encountered at Inchon and Crete. To provide operational protection, the planner will have to insure that air <u>and</u> sea superiority are gained. This protection will be a prerequisite to any forcible entry operation. Depending on the level of the enemy threat, the protection effort may require major preliminary operations on the sea or in the air. Operational fires will provide the primary means for achieving the desired levels of sea and air superiority.

Deception operations must be integrated into all operations to enhance force protection. Feints, demonstrations, and raids can be used to draw enemy operational forces away from the intended forcible entry location. Once the enemy commits operational forces to a deception effort, the friendly force can capitalize on its superior operational mobility to gain a positional advantage

at the location of its choice.

CONTEMPORARY OPERATIONAL COMMAND & CONTROL CAPABILITIES

Inchon and Crete demonstrate the requirement for establishing a joint command and control system for a large scale forcible entry. Much of the success of Operation Chromite can be attributed to the establishment of a joint command and control system which successfully planned, directed, coordinated and controlled all aspects of the operation. In contrast, the failure of the seaborne phases of Operation Mercury were the result of deficiencies in the German command and control structure. By subordinating all forces to a Luftwaffe command, the operation took on a distinct air force flavor. As a result, the seaborne phase of Mercury suffered from a lack of planning expertise and attention caused by the subordination of this phase to a command element unsuited for the task.

Any contemporary large scale forcible entry operation will be a four service, multi-dimensional (amphibious and airborne) effort. Despite this fact, no joint doctrine exists for a multi-dimensional forcible entry operation. (87) Joint amphibious doctrine is espoused in Joint Publication 3-02. Airborne operations are covered in the multi-service publication FM 100-27/AFM 2-50. The challenge for the planner is to integrate these operations in light of the current doctrinal void.

This problem was addressed by Major Harry M. Murdock in his monograph "Doctrine for Combined Airborne and Amphibious Operations." (88) Murdock concluded that current

amphibious and airborne doctrine could be integrated if an airborne/amphibious operation was conducted in accordance with joint amphibious doctrine. (89) Two possible arrangements are offered as solutions to the command and control problem (Appendix D). These structures optimize the span of control of the overall commander by providing a common ground force commander and utilize current doctrinal procedures to promote staff efficiency and communications. (90)

CONTEMPORARY OPERATIONAL INTELLIGENCE CAPABILITY

Planners at Inchon and Crete relied heavily on overhead imagery and reconnaissance to provide the bulk of their intelligence. Their experiences point out the weakness of overhead imagery, i.e. it is good for counting things not people. (91) Thus, the Inchon planners were successful because they could identify empty gun positions through aerial reconnaissance. By combining this information with known intelligence gathered on enemy forces pressuring the 8th Army in the Pusan Perimeter, the capability of the NKPA to mount an operational response to Inchon could be determined. The Germans on Crete suffered heavily for their sole reliance on aerial imagery. Because the British were an infantry heavy force, they had to count people (e.g. light infantry) vice things (e.g. tanks) to determine force strength and disposition. When the British took advantage of the natural concealment offered by Crete's olive groves, the Germans wrongly deduced the lack of observable activity to mean a lack of forces.

Today's planner will face a similar problems if an over-reliance is placed on overhead imagery. Despite technological advances in platforms and imagery techniques which allow infrared along with tradition photographic coverage of an area, the same limitation faced at Inchon and Crete still exists. This fact led to problems in estimating Iraqi force strengths during the recent Gulf War. Thus, while pre-war intelligence estimates placed Iraqi strength in the Kuwait Theater of Operations at 540,000, post-war analysis placed it as low as 183,000. (92)

To avoid similar problems, the operational planner must emphasize the use of multiple intelligence sources. High technology systems such as satellite and aerial (manned and unmanned) imagery and airborne synthetic aperature radars (e.g. JSTARS) must be supplemented by the special reconnaissance capabilities of special forces, electronic warfare, and human intelligence. All sources of intelligence will have to be tapped if the goal of "getting into the mind" of the enemy operational commander is to be achieved.

CONTEMPORARY OPERATION SUPPORT CAPABILITY

Inchon and Crete demonstrate the importance of the early establishment of lines of communications/support. Aerial lines of communications will allow the rapid introduction of light reinforcements and high priority equipment. Establishing sea lines will allow for the introduction of heavy forces and long term sustainment.

The forcible entry forces will require relatively

little initial support. An amphibious Marine Expeditionary Force is deployed with sixty days of sustainability (93) and a medium airborne brigade only requires approximately fourteen C-130 sorties per day to sustain it. (94) Instead, the primary concern for today's planner should be on the introduction of the rapid and deliberate reinforcement force sets and long term sustainment.

Planners should follow the lead of the Chromite staff and place special emphasis on seizing and quickly placing into service port and airfield facilities within the theater of operations. Port facilities will be extremely critical since ninety-five percent of all cargo will be introduced into a theater through sealift. (95) The decline in amphibious shipping and its replacement by commercial type shipping (e.g. MPS and Fast Sealift Ships) for rapid and deliberate reinforcements places an added emphasis on port facilities. Although these ships have the capability of being off loaded "in-stream" or "over the shore" using lighters and causeways, they are most efficiently off loaded at existing and protected port facilities. For example, a MPS squadron can be unloaded at pierside in three days compared to five days "in-stream." (96)

The problems of operational support at Inchon and Crete were eased by the relatively short lines of communication between the theater bases (Japan and Greece respectively) and the forcible entry site. These theater bases provided a location for the secure build-up of long term logistics stockpiles. Historically the United States has required

similar bases in or near a disputed region. In World War II, Great Britain provided a forward staging area for the projection of power into Western Europe. Operations in Vietnam were supported from bases in the Philippines and Thailand.

In any future contingency, forward staging base availability will be one of the most important support concern for the operational planner. These bases will provide a benign environment for force build-up from strategic transportation assets. The further the crisis area is from the U.S., the more critical this requirement will become. Ideally, these bases will be obtained by political negotiation. But, if forced to act unilaterally, the operational planner should be prepared to forcibly seize these bases. If this becomes necessary, base seizure and establishment may become a major operation within the overall campaign.

CONCLUSIONS

The new National Military Strategy's emphasis on the projection of military power by CONUS based forces will place increased emphasis on force entry operations. While the benign entry of an administrative deployment has historically been the most likely type of force entry operation, the operational planner must be ready to face the more difficult option of an opposed or forcible entry.

When conducting a forcible entry in a major regional contingency, the planner will be faced with the stark reality that the U.S. possesses finite forcible entry forces

as a result of amphibious shipping and airlift shortages. Because of this, the planner must determine how to successfully introduce decisive military force into the contingency region.

A historical analysis of two historical forcible entry operations identified the critical operational functions which must be accomplished to ensure a successful forcible entry operation. By comparing these functions to current U.S. capabilities it has been determined that a planner can overcome the deficiencies in current force capabilities if he capitalizes on the complementary capabilities of all available forces and operating systems.

Combat power in a contingency region is a function of the orchestration of all the Operational Operating Systems. Each of the operating systems is a variable in the total combat power equation. A shortage in one operating system can be offset by increasing the strength in another system.

The historical example of Inchon (Operation Chromite) provides an ideal case study for contemporary planners. In each operational operating system, innovative solutions were used to overcome potential problems. Today's planner will face many of the same challenges. Only the future will tell if they can produce similar results?

APPENDIX A

THE BLUEPRINT OF THE BATTLEFIELD AND THE OPERATIONAL OPERATING SYSTEMS

The Army's Training and Doctrine Command (TRADOC) has developed the Blueprint of the Battlefield as a common reference system for analyzing and integrating operations. The Blueprint is a tool that provides a basis for describing requirements, capabilities, and combat activities at the strategic, operational, and tactical levels of war. The Blueprint provides a framework around which a variety of applications can be built. Because it is a framework and not an end in itself, all functions receive equal treatment, when in fact some functions are more important than others. The functions contained in the Blueprint provide a basis for establishing the performance standards necessary for the successful execution of missions or operations. (97)

The Blueprint for each level of war is organized by operating systems. These operating systems are the major functions that must be performed at each level of war to successfully execute an operation. (98) At the operational level of war six Operational Operating Systems (OOS) have been identified. These are: operational movement and maneuver, operational fires, operational protection, operational command and control, operational intelligence, and operational support. (99)

OPERATIONAL MOVEMENT AND MANEUVER

The operational movement and maneuver OOS consists of "the disposition of joint and/or combined forces to create a

decisive impact on the conduct of a campaign or major operation by either securing the operational advantages of position before battle is joined or exploiting tactical success to achieve strategic operational or strategic results." (100)

Operational movement consists of the regroupment, deployment, shifting or movement of joint operational formations within the theater of operations from less threatened or less promising areas to more decisive positions elsewhere. Operational movements can be conducted by any means (joint, allied, host nation, or third country) or any mode (air, land, or sea). (101)

OPERATIONAL FIRES

Operational fires are defined as "the application of firepower to achieve a decisive impact on the campaign or major operation." (102) Unlike tactical fire support, operational fires are not fire support and operational maneuver is not dependant on them. They are a separate component of the operational scheme and are co-equal to operational movement and maneuver. (103) Operational fires focus on: the facilitation of maneuver to operational depths, isolation of the battlefield, and destruction of critical functions and facilities having operational significance. (104)

OPERATIONAL PROTECTION

Operational protection provides for the conservation of the fighting force so that it can be applied at the decisive time and place. It includes all actions taken to counter

the enemy's firepower and maneuver by making personnel, systems, and operational formations difficult to locate, strike, and destroy. (105) Included under this operating system are those actions which provide protection from the enemy's operational level actions, air defense, operations security, and deception. (106)

OPERATIONAL COMMAND AND CONTROL

Operational command and control is the exercise of authority and direction by a properly designated commander over apportioned forces in the accomplishment of the mission. This function is accomplished by an operational commander establishing a system for planning, directing, coordinating, and controlling forces in conducting campaigns and major operations. (107)

OPERATIONAL INTELLIGENCE

Operational intelligence is the intelligence required for the planning and conduct of campaigns and major operations. Operational intelligence is concentrated on the location and identification of the enemy's operational center of gravity. Additionally, it seeks to identify high payoff targets that will achieve strategic aims if attacked. (108)

Operational intelligence must probe the enemy commander's mind. While many of the elements of tactical intelligence apply at the operational level, they must be evaluated in a wider strategic context in an effort to understand how they will effect the enemy's decision making process. Effective operational intelligence must be

predictive in nature and see the campaign through the enemy commander's eyes. (109)

OPERATIONAL SUPPORT

Operational support consists of the logistical and other support activities required to sustain the force in campaigns and major operations. Operational sustainment extends from the theater of operations sustainment base to the forward Combat Service Support (CSS) units, resources, and facilities organic to major tactical organizations. (110) Operational support uses joint or combined transportation means to arm, fuel, fix, and man the forces, and distribute stocks and services. (111)

APPENDIX B

OPERATION CHROMITE: MAJOR FORCES AND COMMAND RELATIONSHIPS

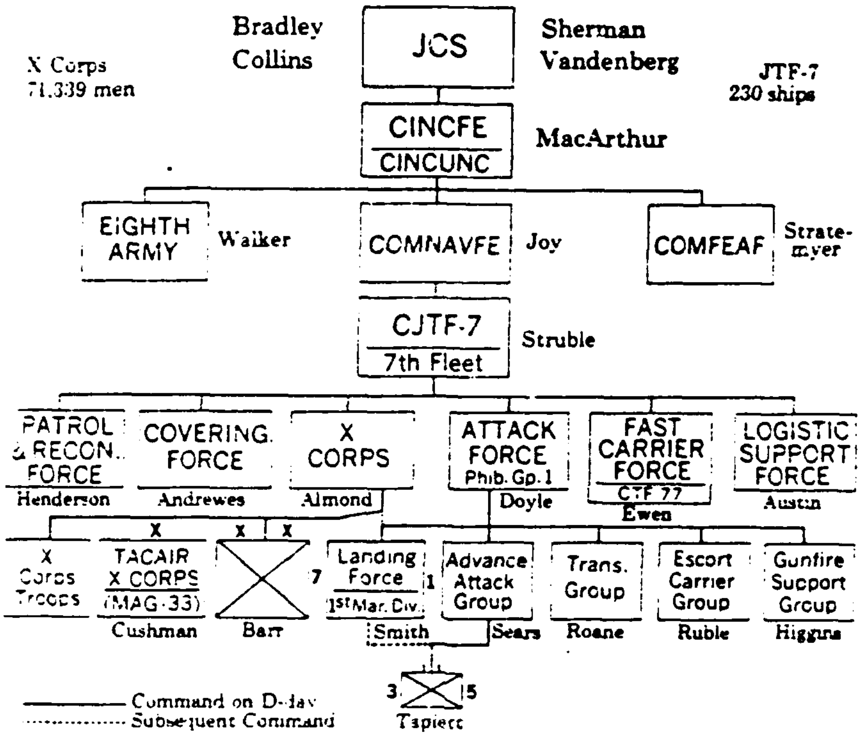


Table 1

(Robert Debs Heinl, Jr., <u>Victory at High Tide: The Inchon-Seoul Campaign</u> (Baltimore, MD: Nautical and Aviation Publishing Company of America, 1979), 53.)

OPERATION MERCURY: MAJOR FORCES AND COMMAND RELATIONSHIPS

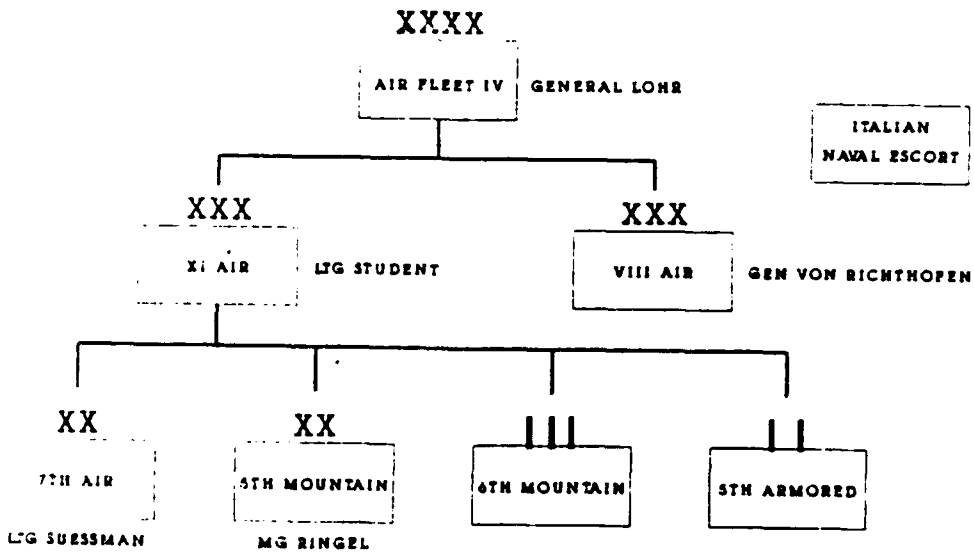


Table 2

(Julius Ringel, <u>Capture of Crete (May 1941)</u>, (U.S. Army Europe: Historical Division, 1941).)

APPENDIX C

JOINT FORCE SEQUENCING

The increased emphasis on power projection of CONUS based forces makes it imperative that operational planners understand the capabilities and relationship of different types of forces across the conflict continuum. Often, operational planners use "rapid deployment forces" as a synonym for power projection forces. This simplistic view overlooks the fact that rapidly deployable forces are only a subset of the entire power projection system. (112)

The power projection system consists of four sets of forces. These sets can be categorized as rapid deployment, rapid or light reinforcement, deliberate or heavy reinforcement, and sustainability forces. (Table 1) While basic functional differences between force sets do exist, in some cases the dividing lines among the force sets are not distinct. (113)

Forces belonging to the rapid deployment set provide the cutting edge of the total projection system.
To be considered a rapid deployment force, a force must be capable of being deployed to assembly areas adjacent to the objective area and must be able to conduct combat operations on D-Day at H-Hour. This force set can include naval forces (carrier battle groups, amphibious forces), tactical air forces, land forces (airborne and air assault forces), and mobility forces (Military Airlift Command). The amphibious and land forces of this set possess the capability to

conduct a forcible entry. (114)

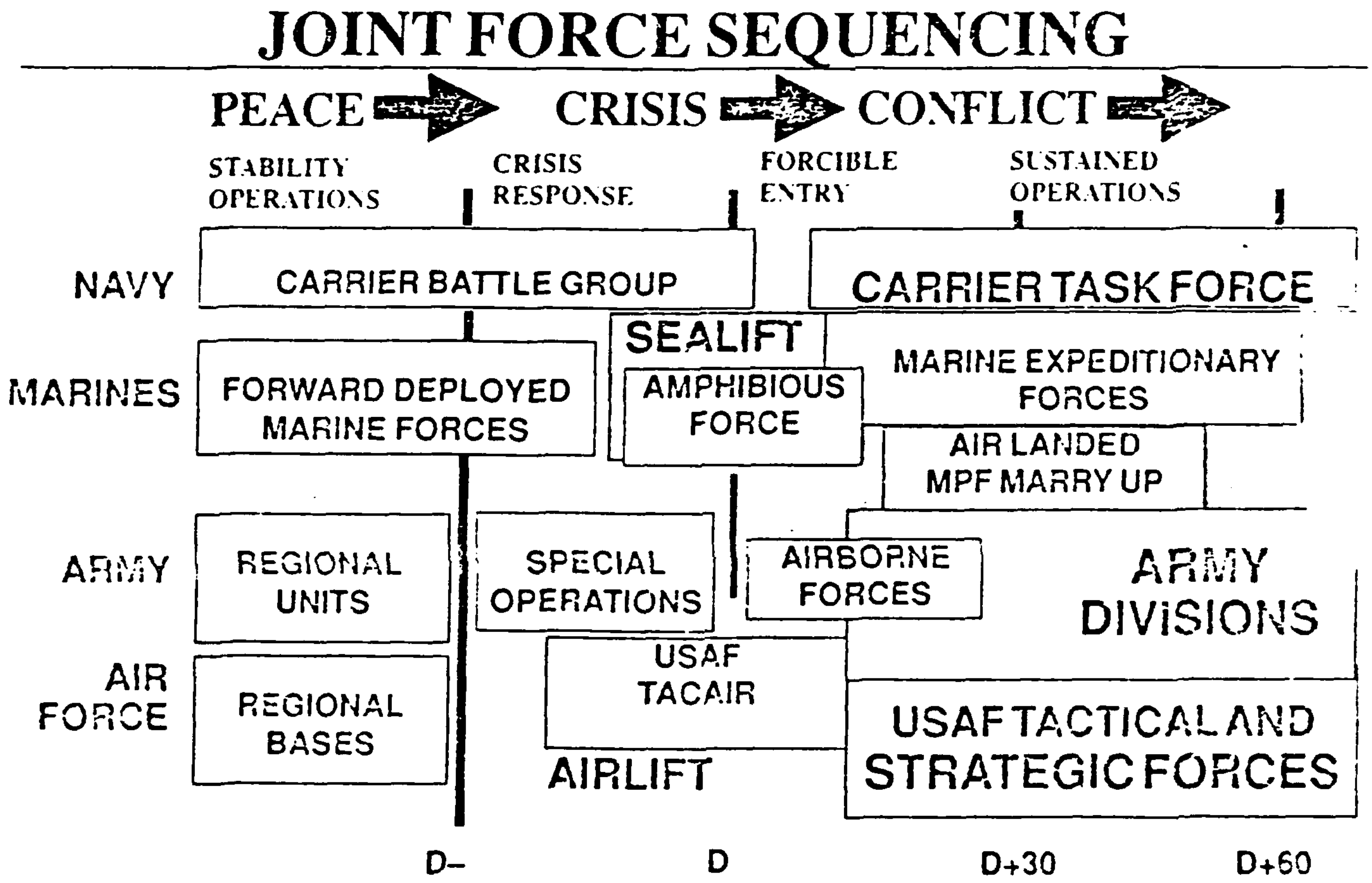
The rapid light reinforcement forces differ from the rapid deployment forces primarily by the fact that they do not possess a forcible entry capability. This force set includes light and infantry units inserted into the theater of operations by follow-on shipping or airlift. Also included in this category are maritime pre-positioned forces. Rapid deployment forces can also be used in the rapid reinforcement role. (115)

Rapid reinforcement forces are followed by the deliberate (heavy) reinforcement forces. These heavy forces require more time and mobility assets for deployment than the rapid or rapid reinforcement forces. The deliberate forces are comprised of armored and mechanized units. These units provide the forces of decision for any protracted operation or campaign. (116)

Sustainment forces are normally committed along with the rapid reinforcement forces. They are oriented primarily toward support functions. They operate ports, airheads, and facilities within the communications zone and provide intra-theater transportation. (117)

To successfully project military power, an operational planner must orchestrate the different force sets to ensure a smooth transition as each force set is introduced to a theater of operations. In a contingency which calls for a forcible entry, the planner must ensure that a continuum exists between the force sets. Each set becomes an "enabler" for the succeeding force set. A failure in a

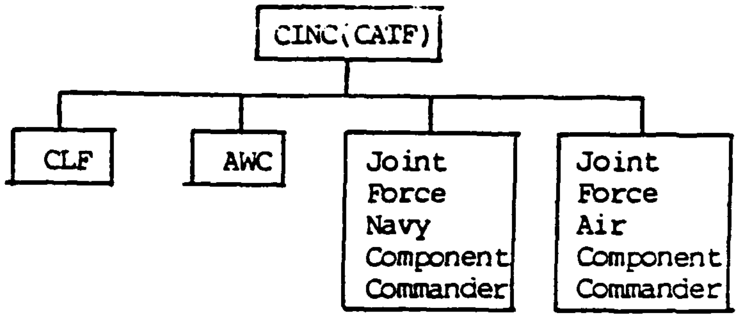
force set or a break in the force sequence can spell disaster for an operation/campaign.



(Mackubin T. Owens, "The Marine Corps and the New National Military Strategy," Amphibious Warfare Review 9 (Summer 1991): 66.)

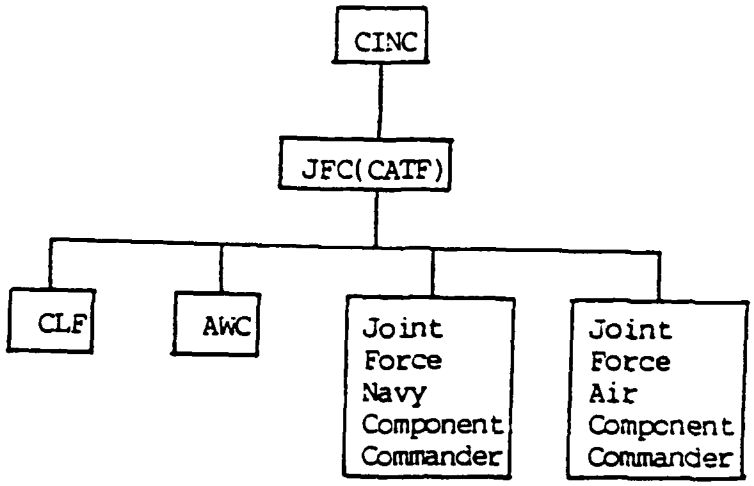
APPENDIX D

COMMAND & CONTROL OF JOINT AIRBORNE/AMPHIBIOUS OPERATIONS (118)



With this arrangement, the CINC declares that the mission will be executed as an amphibious operation and establishes his subordinates as functional commanders - Commander Landing Force, Amphibious Warfare Commander, Joint Force Navy Component Commander, and Joint Force Air Component Commander.

Table 1



With this arrangement, the CINC has established a joint task force to execute the amphibious operation. The JFC designates his subordinate commanders along the same functional lines as described above.

Table 2

Using the command arrangements depicted above provides the following advantages:

- The CINC (Table 1) or Joint Force Commander (JFC)

(Table 2) acts as the Officer in Tactical Command (OTC)

- The Commander Landing Force (CLF) has unity of command over all ground and designs a single ground scheme of maneuver for implementation.

- The Amphibious Warfare Commander (AWC) can directly influence his ability to support the ground scheme of maneuver with his amphibious squadron/group. He acts as Composite Warfare Commander (CWC) for his task force.

- The Joint Force Navy Component Commander acts as CWC and fights the naval war isolating the amphibious objective area while allocating strike aircraft to support the ground operation.

- The Joint Force Air Component Commander can directly influence his ability to support the ground scheme of maneuver with his transport and tactical aircraft.

ENDNOTES

1 Mackubin T. Owens, "The Marine Corps and the New National Military Strategy," Amphibious Warfare Review 9 (Summer 1991): 64.

2 Joint Chiefs of Staff, The National Military Strategy 1992, (Washington, DC: Joint Staff, Jan 1992), 6.

3 Ibid., 1.

4 Ibid., 7.

5 Ibid., 7.

6 Ibid., 6.

7 George B. Christ, "A U.S. Military Strategy for a Changing World," Strategic Review 18 (Winter 1990): 22.

8 Joint Chiefs of Staff, JCS Test Pub 3-0, Doctrine for Unified and Joint Operations, (Washington, DC: Joint Staff, Jan 1990), x.

9 Jeffrey Record, The Rapid Deployment Force and U.S. Military Intervention in the Persian Gulf, (Washington, DC: Corporate Press, Inc., 1981), 27.

10 JCS Test Pub 3-0, x.

11 Record, The Rapid Deployment Force, 65.

12 Ibid.

13 Ibid., 64-65.

14 L. Edgar Prina, "Two If By Sea...Are We Ready?," Army 40 (December 1990): 15 and Airlift Concepts and Requirements Agency, A Qualitative Intratheater Airlift Requirements Study, (Scott AFB, IL: MAC/TRADOC, 1985), xiii.

15 L. Edgar Prina, "Two If By Sea...Are We Ready?," 15.

16 Mackubin T. Owens, "The Marine Corps and the New National Military Strategy," 67.

17 Record, The Rapid Deployment Force, 65.

18 Robert Debs Heinl, Jr., Victory at High Tide: The Inchon-Seoul Campaign, (Baltimore, MD: Nautical and Aviation Publishing Company of America, 1979), 14.

19 D. Clayton James, The Years of MacArthur 3 vols., (Boston: Houghton Mifflin Co., 1985), 3:425-426.

20 Heinl, Victory at High Tide, 6-7.

21 Ibid., 41.

22 Allan R. Millet, Semper Fidelis: The History of the United States Marine Corps, (New York: Free Press, 1980), 487.

23 Lynn Montross and Nicholas A. Canzona, The Inchon -Seoul Operation (U.S. Marine Operations in Korea, Vol. II), (Washington: HQ, U.S. Marine Corps, 1955), 83.

24 Ibid., 53.

25 Heinl, Victory at High Tide, 63.

26 Ibid., 78.

27 Ibid., 57.

28 Montross and Canzona, The Inchon-Seoul Operation, 70.

29 Heinl, Victory at High Tide, 78.

30 Ibid., 25.

31 Ibid., 79.

32 Ibid.

33 Ibid., 32-33.

34 Ibid., 50.

35 Montross and Canzona, The Inchon-Seoul Operation, 43.

36 Heinl, Victory at High Tide, 189.

37 Ibid., 189.

38 David H. Mamaux, "Operation CHROMITE: Operational Art in a Limited War" (SAMS Monograph, School of Advanced Military Studies, US Army Command and General Staff College, 1987), 4-5.

39 Montross and Canzona, The Inchon-Seoul Operation, 60.

40 Robert Schmidt, et al., "Operation Chromite (Inchon)," CSI Battlebook 2-D (Fort Leavenworth, KS: Combat Studies Institute, US Army Command and General Staff College, 1984), 40.

41 Montross and Canzona, The Inchon-Seoul Operation, 60-61.

42 Ibid., 311-312.

43 Robert Schmidt, et al., "Operation Chromite," 44.

44 Ibid., 44-45.

45 Heinl, Victory at High Tide, 149.

46 John Keegan, The Second World War, (New York: Viking Penguin, 1989), 150.

47 Ibid., 160.

48 G. C. Kiriakopoulos, Ten Days to Destiny, (New York: Franklin Watts, 1985), 30.

49 Ibid., 38.

50 Ibid., 29.

51 Ibid., 101-102.

52 Ibid.

53 Ibid., 162

54 Peter North, "Technical Section" in Airborne Operations, ed. Philip de Ste. Croix, (New York: Cresent Books, 1978), 16.

55 Kiriakopoulos, Ten Days to Destiny, 40.

56 Ian McD. G. Stewart, The Struggle for Crete: A Story of Lost Opportunity: 20 May-1 June 1941, (Oxford: Oxford University Press, 1966), 88.

57 Ibid.

58 Ibid., 79.

59 Kiriakopoulos, Ten Days to Destiny, 111-112.

60 Stewart, The Struggle for Crete, 132-133.

61 Keegan, The Second World War, 170-171.

62 Ibid., 163.

63 Ibid., 163-164.

64 Ibid., 170.

65 Stewart, The Struggle for Crete, 79.

66 Ibid., 88.

67 Ibid., 89.

68 Kiriakopoulos, Ten Days to Destiny, 102 and Keegan, The Second World War, 162.

69 Keegan, The Second World War, 168.

70 Stewart, The Struggle for Crete, 89.

71 Ibid., 80.

72 Ibid., 476.

73 Kiriakopoulos, Ten Days to Destiny, 371.

74 Keegan, The Second World War, 172.

75 John J. Kelly, "LCAC: A New Chapter in Amphibious Operations," Amphibious Warfare Review 9 (Summer 1991): 95.

76 International Institute for Strategic Studies, The Military Balance: 1991-1992, (Oxford: Nuffield Press, 1991), 22.

77 Owens, "The Marine Corps and the New National Military Strategy," 67.

78 Jane's Defense Data, Jane's Fighting Ships 1991-92, (London: Butler & Tanner, 1991), 200 & 691.

79 International Institute for Strategic Studies, The Military Balance: 1991-1992, 25 and Airlift Concepts and Requirements Agency, A Qualitative Intratheater Airlift Requirements Study, B-9.

80 Theodore L. Gatchel, "Hang Together, or Hang Separately," Proceedings 116 (November 1990): 58.

81 Ibid.

82 Ibid.

83 Norman Friedman, "The Air Campaign," Proceedings 117 (April 1991): 50.

84 U.S. News and World Report, Triumph Without Victory (New York: Times Books, 1992), 240-243.

85 Stan Arthur and Marvin Pokrant, "The Storm at Sea," Proceedings 117 (May 1991): 82-83.

86 John Haystead, "Autonomous Weapons - Are We Smart Enough For Them?," Defense Electronics 24 (February 1992): 33.

87 John J. Cushman, Command and Control of Theater Forces: The Future of Force Projection Operations, (Cambridge, MA: Center for Information Research, 1991), 58.

88 Harry M. Murdock, "Doctrine for Combined Airborne and Amphibious Operations," (SAMS Monograph, School of Advanced Military Studies, US Army Command and General Staff College, 1991).

89 Ibid., 41.

90 Ibid.

91 U.S. News, Triumph Without Victory, 404.

92 "U.S. estimates of Iraqis faulted," The Kansas City Star, 24 April 1992: 1a-b.

93 Advanced Amphibious Study Group, "Planner's Reference Manual, Vol. II," (Washington, DC: HQ, U.S. Marine Corps, 1983), 14-4-8.

94 Thomas G. Waller, Jr., "Bolt from the Sky: The Operational Employment of Airborne Forces," (SAMS Monograph, School of Advanced Military Studies, US Army Command and General Staff College, 1986), 27.

95 Douglas M. Norton, "Sealift: Keystone of Support," Proceedings 117 (May 1991): 42.

96 Command and General Staff College, "Student Text 100-1, Navy and Marine Corps," (Fort Leavenworth, US Army Command and General Staff College, 1990), 11-19.

97 U.S. Army Training and Doctrine Command, TRADOC Pam 11-9, Blueprint of the Battlefield, (Ft Monroe, VA: HQ, TRADOC, Apr 1990), 2.

98 Ibid.

99 Ibid., 16.

100 Ibid., 42.

101 Ibid.

102 Ibid., 43.

103 Ibid.

104 Ibid., 13.

105 Ibid.

106 Ibid., 44-45.

107 Ibid., 46.

108 Ibid., 48.

109 Ibid., 15.

110 Ibid., 49.

111 Ibid., 15.

112 David A. Quinlan, The Role of the Marine Corps in Rapid Deployment Forces, (Washington, DC: National Defense University Press, 1983), 13.

113 Ibid., 13-14.

114 Ibid., 14.

115 Ibid.

116 Ibid.

117 Ibid., 15.

118 Murdock, "Doctrine for Combined Airborne and Amphibious Operations," 42-43.

BIBLIOGRAPHY

BOOKS

Bartlett, Merrill L. Assualt from the Sea. Annapolis, MD: Naval Institute Press, 1983.

Bellamy, Chris. The Future of Land Warfare. New York: St. Martin's Press, 1987.

Binkin, Martin and Record, Jeffrey. Where Does the Marine Corps Go from Here?. Washington, DC: Brookings Institute, 1976.

Cushman, John J. Command and Control of Theater Forces: The Future of Force Projection Operations. Cambridge, MA: Center for Information Research, 1991.

Evans, Michael. Amphibious Operations: The Projection of Sea Power Ashore. London: Brassey's, 1990.

Heinl, Robert Debs Jr. Victory at High Tide: The Inchon-Seoul Campaign. Baltimore, MD: Nautical and Aviation Publishing Company of America, 1979.

International Institute for Strategic Studies. The Military Balance: 1991-1992. Oxford: Nuffield Press, 1991.

Isely, Jeter A. and Crowl, Philip A. The U.S. Marines and Amphibious War. Princeton, NJ: Princeton University Press, 1951.

James, D. Clayton. The Years of MacArthur. 3 vols. Boston: Houghton Mifflin Co., 1985.

Jane's Defense Data. Jane's Fighting Ships 1991-92. London: Butler & Tanner, 1991.

Kaufman, William W. A Thoroughly Efficient Navy. Washington, DC: Brookings Institute, 1987.

Keegan, John. The Second World War. New York: Viking Penguin, 1989.

Kiriakopoulos, G.C. Ten Days to Destiny. New York: Franklin Watts, 1985.

Millet, Allan R. Semper Fidelis: The History of the United States Marine Corps. New York: Free Press, 1980.

Montross, Lynn and Canzona, Nicholas A. The Inchon -Seoul Operation (U.S. Marine Operations in Korea, Vol. II. Washington, DC: HQ, U.S. Marine Corps, 1955.

North, Peter. "Technical Section." In Airborne Operations. Edited by Philip de Ste. Croix. New York: Cresent Books, 1978.

Pack, S.W.C. The Battle for Crete. Annapolis, MD: Naval Institute Press, 1973.

Perkins, Stuart L. Global Demands: Limited Forces. Washington, DC: National Defense University Press, 1984.

Quinlan, David A. The Role of the Marine Corps in Rapid Deployment Forces. Washington, DC: National Defense University Press, 1983.

Record, Jeffrey. The Rapid Deployment Force and U.S. Military Intervention in the Persian Gulf. Washington, DC: Corporate Press, Inc., 1981.

Simpkin, Richard. Race to the Swift. London: Brassey's Defence Publishers, 1986.

Stewart, Ian McD. G. The Struggle for Crete: A Story of Lost Opportunity: 20 May-1 June 1941. Oxford: Oxford University Press, 1966.

Tugwell, Maurice. Airborne to Battle. London: William Kimber Ltd., 1971.

U.S. News and World Report. Triumph Without Victory. New York: Times Books, 1992.

Manuals

Advanced Amphibious Study Group. Planner's Reference Manual. 3 Vol. Washington, DC: HQ, U.S. Marine Corps, 1983.

Airlift Concepts and Requirements Agency, A Qualitative Intratheater Airlift Requirements Study, (Scott AFB, IL: MAC/TRADOC, 1985)

Field Manual 90-4, Air Assault Operations. Washington, DC: HQ Department of the Army, March 1987.

Field Manual 90-26, Airborne Operations. Washington, DC: HQ Department of the Army, December 1990.

Joint Chiefs of Staff, The National Military Strategy 1992. Washington, DC: Joint Staff, 29 Jan 1992.

Joint Chiefs of Staff, JCS Test Pub 3-0, Doctrine for Unified and Joint Operations. Washington, DC: Joint Staff, Jan 1990.

TRADOC Pam 11-9, Blueprint of the Battlefield. Ft Monroe, VA: HQ, U.S. Army Training and Doctrine Command, 27 April 1990.

TRADOC Pam 525-5B, Airland Operations. Ft Monroe, VA: HQ, U.S. Army Training and Doctrine Command, 13 June 1991.

Periodical Articles

Aquilino, John and Sanders, James. "Sealift for the Marines," Amphibious Warfare Review 6 (Fall 1988): 6-16.

Arthur, Stan and Pokrant, Marvin. "The Storm at Sea," Proceedings 117 (May 1991): 82-87.

Bolger, Daniel P. "The Ghosts of Omdurman," Parameters 21 (Autumn 1991): 28-39.

Boylan, Peter J. "Power Projection, Risk and the Light Force," Military Review 62 (May 1982): 62-69.

Brosnan, John F. "An Amphibious Landing? With Civilian Ships?," Naval War College Review 39 (March/April 1986): 35-42.

Christ, George B. "A U.S. Military Strategy for a Changing World," Strategic Review 18 (Winter 1990): 16-24.

Fickett, Richard K. "Anti-Amphibious Warfare in the 1990's," Amphibious Warfare Review 7 (Summer 1989): 108-113.

Friedman, Norman. "The Air Campaign," Proceedings 117 (April 1991): 49-50.

Gatchel, Theodore L. "Hang Together, or Hang Separately," Proceedings 116 (November 1990): 56-62.

Gibson, Andrew E. and Shuford, Jacob L. "Desert Shield and Strategic Sealift," Naval War College Review 44 (Spring 1991): 6-19.

Haynes, Fred E. "What if There is Never Another Opposed Landing?," Amphibious Warfare Review 5 (Fall 1987): 6-8.

Haystead, John. "Autonomous Weapons - Are We Smart Enough For Them?," Defense Electronics 24 (February 1992): 29-37.

Hogg, James R. "Reinforcing Crisis Areas," NATO's Sixteen Nations 35 (December 1990 - January 1991): 12-16.

Kelly, John J. "LCAC - A New Chapter in Amphibious Operations," Amphibious Warfare Review 9 (Summer 1991): 93-98.

Nash, Trevor. "Military Transport Aircraft," Military Technology (May 1991): 12-17.

Norton, Douglas M. "Sealift: Keystone of Support," Proceedings 117 (May 1991): 42-49.

Owens, Mackubin T. "Force Planning in an Era of Uncertainty," Strategic Review 18 (Spring 1990): 9-22.

Owens, Mackubin T. "The Marine Corps and the New National Military Strategy," Amphibious Warfare Review 9 (Summer 1991): 64-69.

Piersall, Charles H., Jr. "Fast Sealift (An Affordable Answer)," Amphibious Warfare Review 7 (Winter 1989): 45-50.

Preston, Antony. "Coast Defence: Obsolete or Overlooked?," Asian Defence Journal (November 1990): 84-90.

Prina, L. Edgar, "Two If By Sea...Are We Ready?," Army 40 (December 1990): 12-21.

Record, Jeffrey. "The Marines and the Amphibious Mission," Amphibious Warfare Review 5 (Summer 1987): 54-61/104-106.

Schwab, Earnest L. "Amphibs and Prepositioning: How Much is Enough?," Amphibious Warfare Review 6 (Winter 1987-1988): 25-29.

Shaker, Steven M. "The Character of Future Warfare," Amphibious Warfare Review 8 (Fall/Winter 1990): 22-24.

Tailyour, R.S. "The Future of Amphibious Warfare," RUSI 136 (Spring 1991): 33-37.

Tow, Sheila L. "Airlift - Delivered Victory," Defense Transportation Journal 47 (June 1991): 47-53.

Unpublished Sources

Bonham, Gordon C. "Airfield Siezure: The Modern "Key to the Country"," School of Advanced Military Studies Monograph, US Army Command and General Staff College, December 1990.

Caldwell, John F.W. "Forced Entry: Does the Current Airborne Division Still Retain this Capability Under the Light Infantry Tables of Organization and Equipment?," School of Advanced Military Studies Monograph, US Army Command and General Staff College, January 1987.

Command and General Staff College. "Student Text 100-1, Navy and Marine Corps," Fort Leavenworth, US Army Command and General Staff College, 1990.

King, Thomas R. "A Prescription for Joint Land Forces Power Projection," Student Paper, Naval War College, June 1991.

Kokko, Richard W. "Joint Operations Involving Marine Amphibious Forces and Army Airborne Forces," Student Paper, Naval War College, June 1988.

Mamaux, David H. "Operation CHROMITE: Operational Art in a Limited War," School of Advanced Military Studies Monograph, US Army Command and General Staff College, May 1987.

Murdock, Harry M. "Doctrine for Combined Airborne and Amphibious Operations," School of Advanced Military Studies Monograph, US Army Command and General Staff College, April 1991.

Schmidt, Robert, et al. "Operation Chromite (Inchon)," CSI Battlebook 2-D, Fort Leavenworth, KS: Combat Studies Institute, US Army Command and General Staff College, 1984.

Waller, Thomas G. Jr. "Bolt from the Sky: The Operational Employment of Airborne Forces," School of Advanced Military Studies Monograph, US Army Command and General Staff College, May 1986.